

REMARKS/ARGUMENTS

Re-examination and favorable reconsideration in light of the above amendments and the following comments are respectfully requested.

Claims 1 - 22 are pending in the application. Currently, claims 1 - 18, 21 and 22 stand rejected and claims 19 and 20 stand objected to.

By the present amendment, claim 19 has been placed into independent form. Thus, claims 19 and 20 are allowable. Further, by the present amendment, claims 1, 14, and 17 have been amended and new claims 23 - 26 have been added to the case. New claims 23 and 24 parallel objected to claims 19 and 20 and thus should be allowable for the same reasons.

In the office action mailed June 14, 2005, claims 1 - 5, 14, 15, 17, 18, and 21 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,672,836 to Merry; claims 6 - 13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Merry; claim 16 was rejected under 35 U.S.C. 103(a) as being unpatentable over Merry in view of U.S. Patent No. 5,232,343 to Butts; and claim 22 was rejected under 35 U.S.C. 103(a) as being unpatentable over Merry in view of U.S. Patent No. 5,924,843 to Staub et al.

The foregoing rejections are traversed by the instant response.

The present invention broadly relates to a turbine engine component and to a method of forming same. The turbine engine component comprises an airfoil portion having a span, a cooling passageway in the airfoil portion extending from a root portion of the airfoil portion to a tip portion of the airfoil portion, and a plurality of turbulation promotion devices in the cooling passageway. The turbulation promotion devices have a P/e which

varies along the span of the airfoil portion, where P is the pitch between adjacent turbulation promotion devices and e is the height of each turbulation promotion device.

Claim 1 as amended herein is allowable over the Merry patent because Merry fails to teach or suggest a plurality of turbulation promotion devices in a cooling passageway which comprise a plurality of pairs of arcuately shaped trip strips. As can be seen from FIG. 4 in Merry, the trip strips are linearly shaped.

Claims 2 - 5, 14, 15, 17, 18, and 21 are allowable for the same reasons as claim 1 as well as on their own accord. With regard to claims 3 and 4, Merry does not teach or suggest a P/e ratio in the range of from 5 to 30. This is best illustrated by the table in column 8 which sets forth an " e/p " ratio of from 5 to 20. The P/e ratio would then be from 0.2 to 0.05. Claim 17 is allowable because Merry does not teach or suggest forming the claimed turbulation promotion devices.

With regard to the obviousness rejection of claims 6 - 13, there is no need for Applicant to show any advantage to the claimed subject matter because the Examiner has not made out a *prima facie* case of obviousness. The Examiner has not identified anything in the prior art which would teach or suggest the claimed pitch and height ranges. Further, the Examiner has not provided any statement as to what would motivate one of ordinary skill in the art to change Merry to have the claimed pitch and height ranges. As noted above, Merry is designed to operate at height to pitch ratios which are quite different from those employed by Applicants. Consequently, there is no reason for Merry to use the claimed pitch and height ranges. The Examiner is hereby requested to withdraw the obviousness rejection of claims 6 to 13.

The rejection of claim 16 on obviousness grounds is duly noted, but Butts does not cure the aforementioned deficiencies of Merry. Further, the cooling passageways in Merry are non-circular. Thus, there would be no reason to provide them with the claimed height to diameter ratio. This rejection should also be withdrawn.

With regard to the rejection of claim 22 on obviousness grounds, the Staub et al. patent does not cure the aforementioned deficiencies of Merry. Thus, claim 22 is allowable for the same reasons that claim 17 is allowable.

New claims 25 and 26 are allowable because none of the cited and applied references teach or suggest the claimed subject matter.

For the foregoing reasons, the instant application is believed to be in condition for allowance. Such allowance is respectfully solicited.

Should the Examiner believe an additional amendment is needed to place the case in condition for allowance, he is hereby invited to contact Applicant's attorney at the telephone number listed below.

The Director is hereby authorized to charge the extra independent claim and additional claim fees of \$400.00 to Deposit Account No. 21-0279. Should the Director determine that

Appl. No. 10/774,822
Amdt. dated Sept. 13, 2005
Reply to office action of June 14, 2005

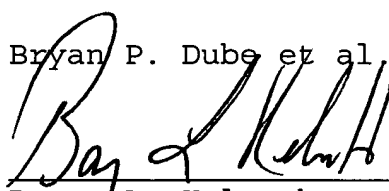
Docket No.: EH-10909(04-103)

an additional fee is due, he is hereby authorized to charge said additional fee to said Deposit Account.

Respectfully submitted,

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By


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I, Nicole Motzer, hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on September 13, 2005.

